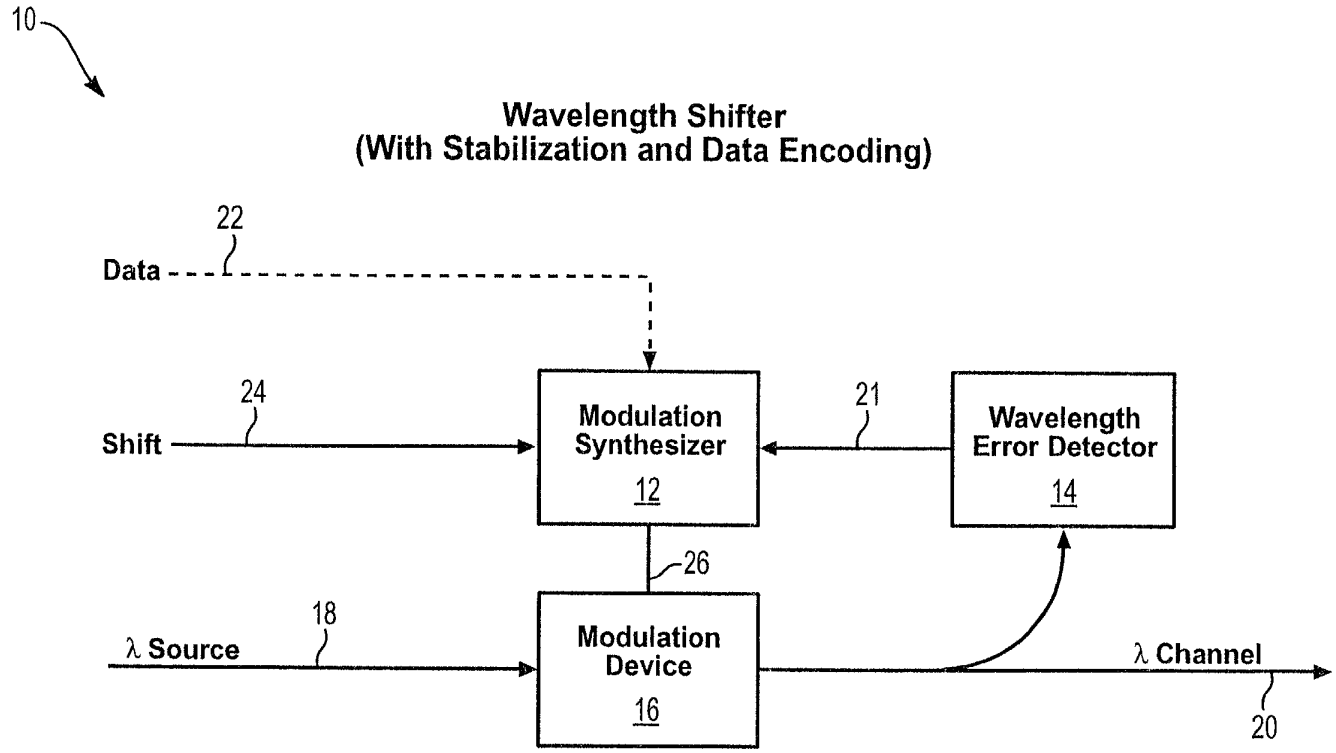

FIG. 1

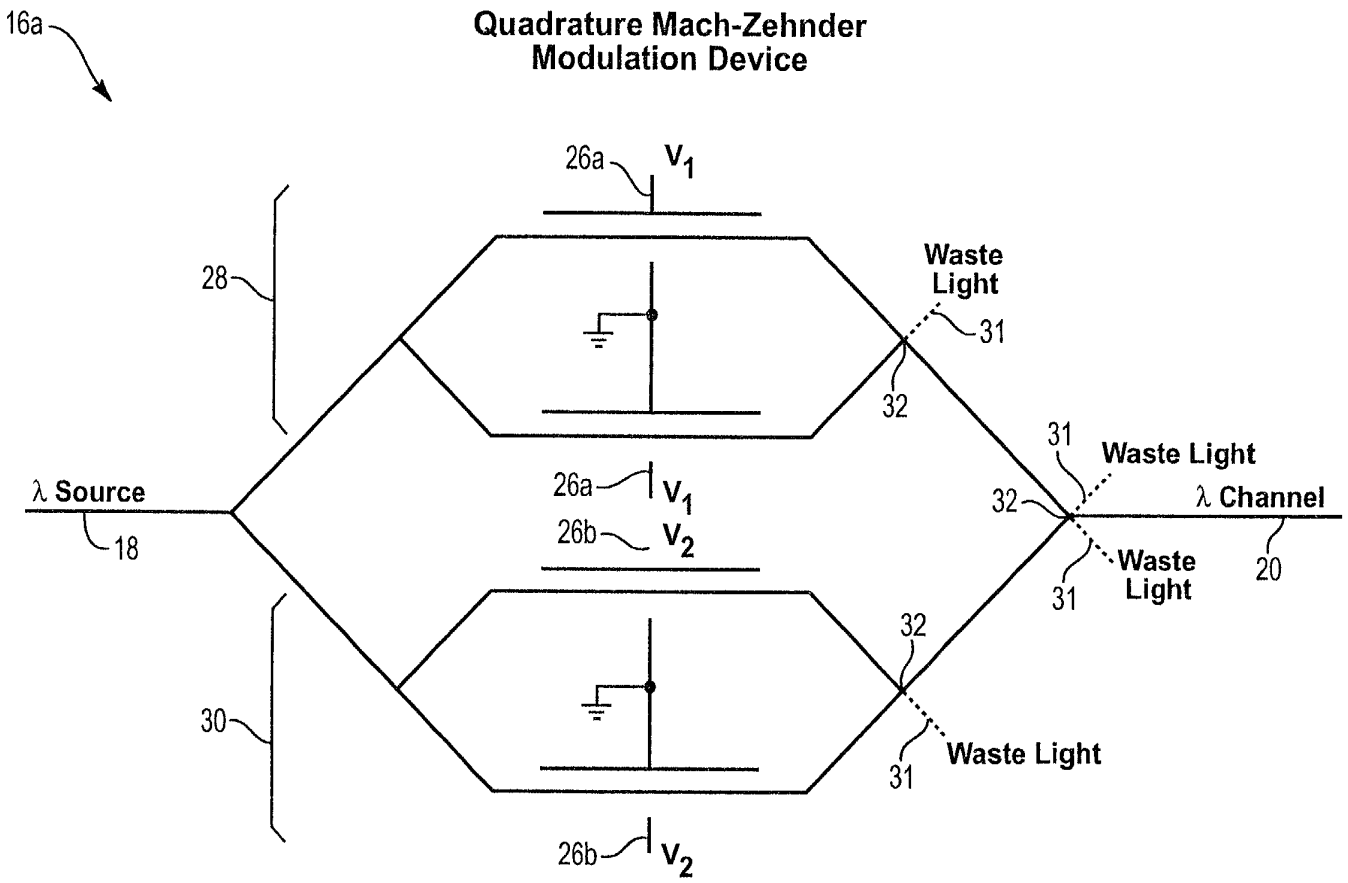

FIG. 2

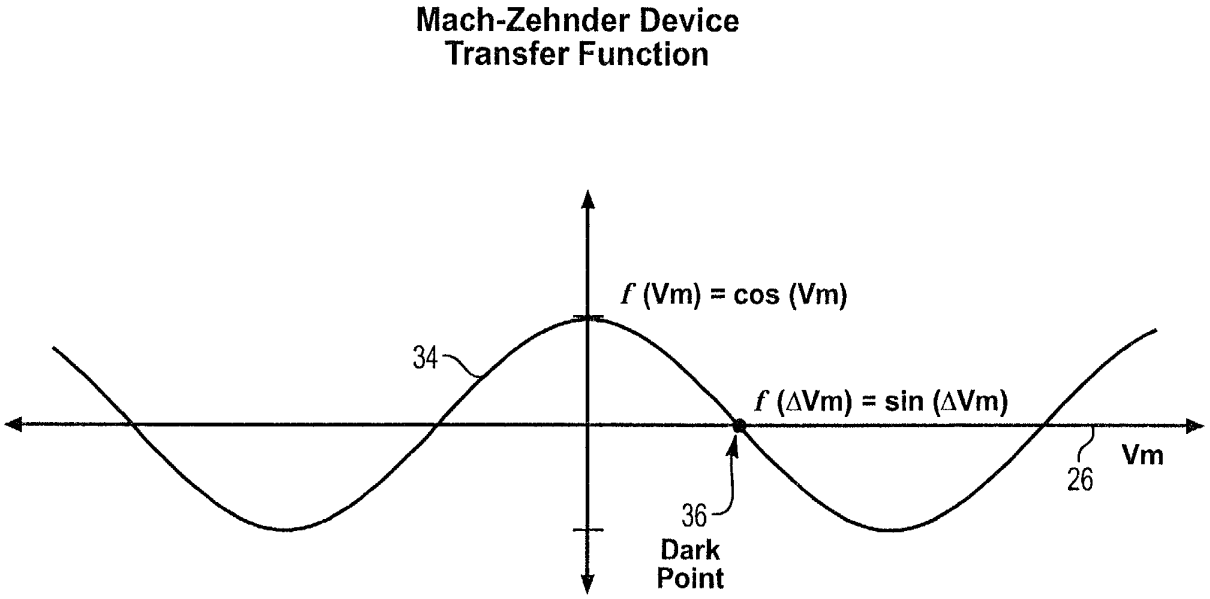

FIG. 3

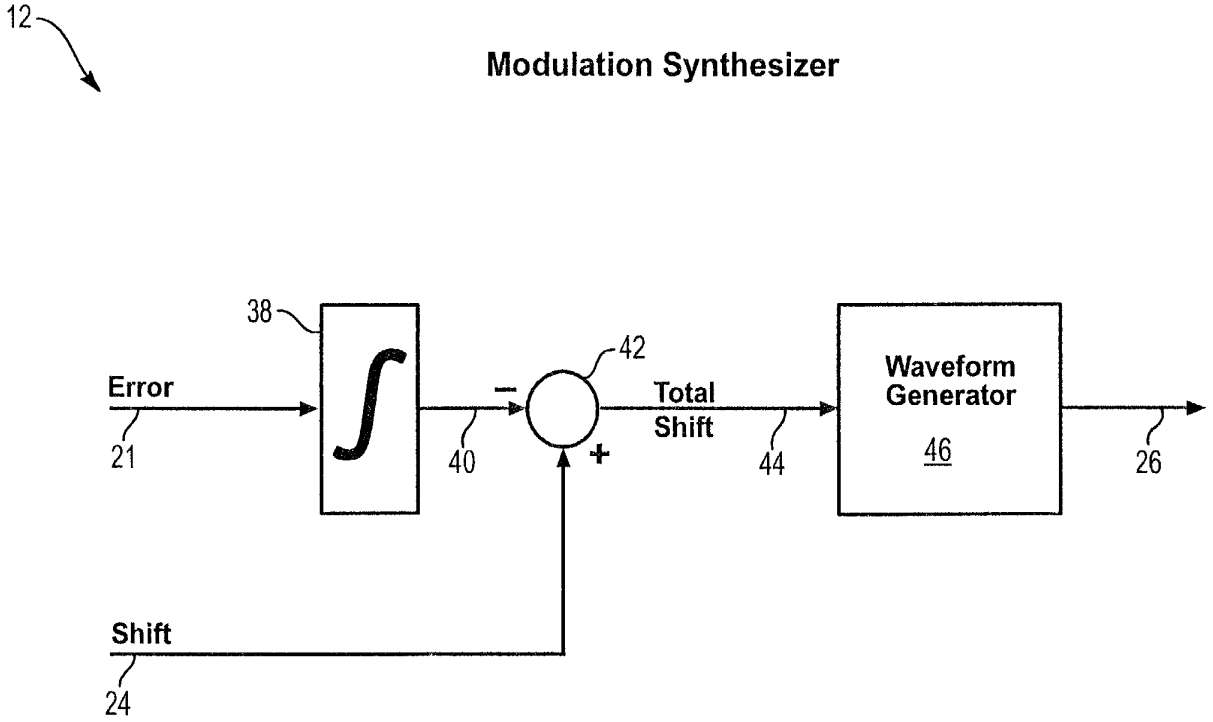

FIG. 4

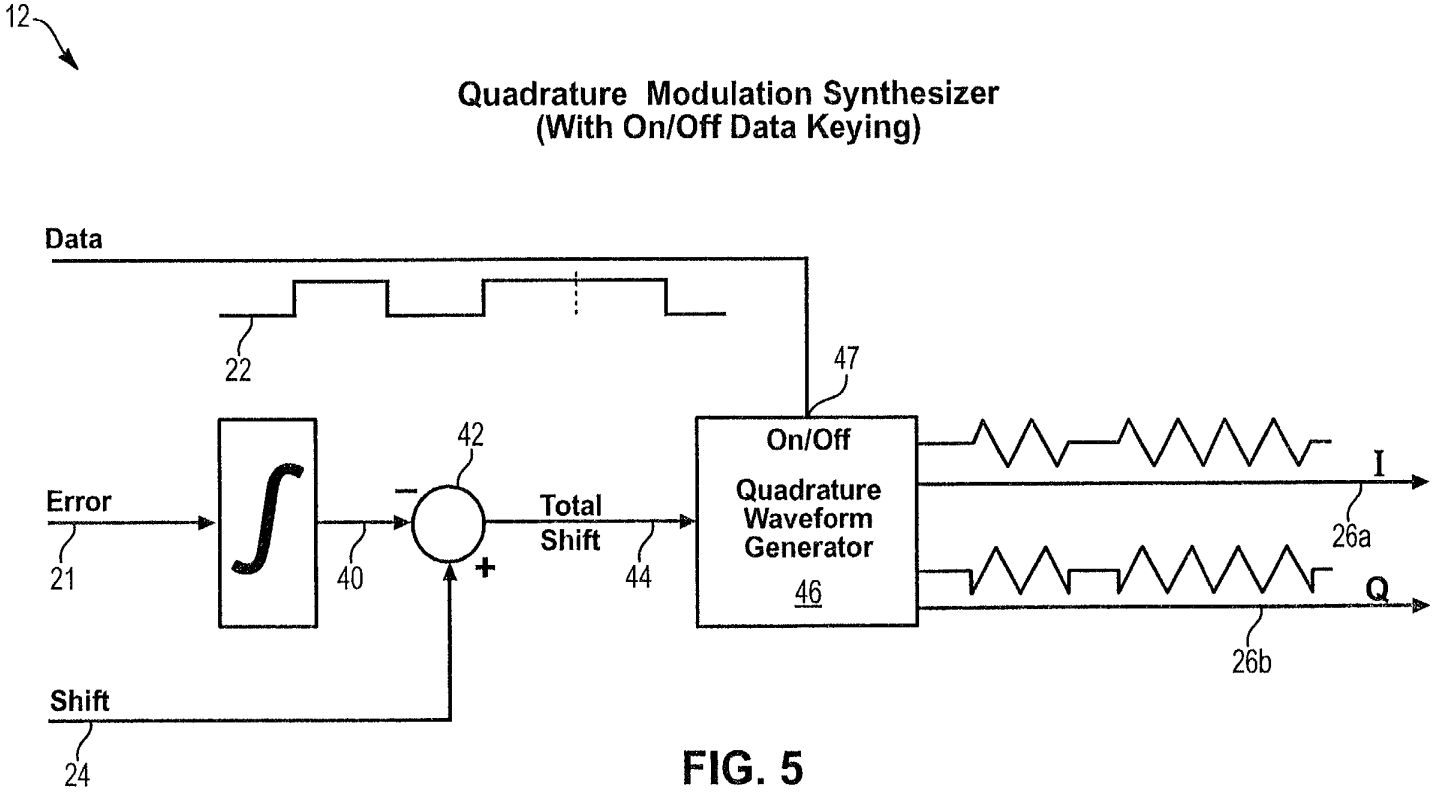
12
Quadrature Modulation Synthesizer
(With On/Off Data Keying)
Data
22
47
Error
21
42
40
Total
Shift
44
On/Off
Quadrature
Waveform
Generator
46
I
26a
Q
26b
Shift
24

FIG. 5

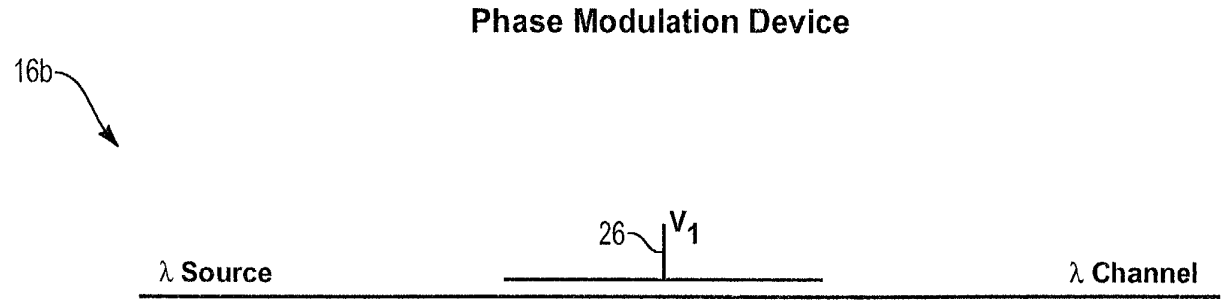

FIG. 6

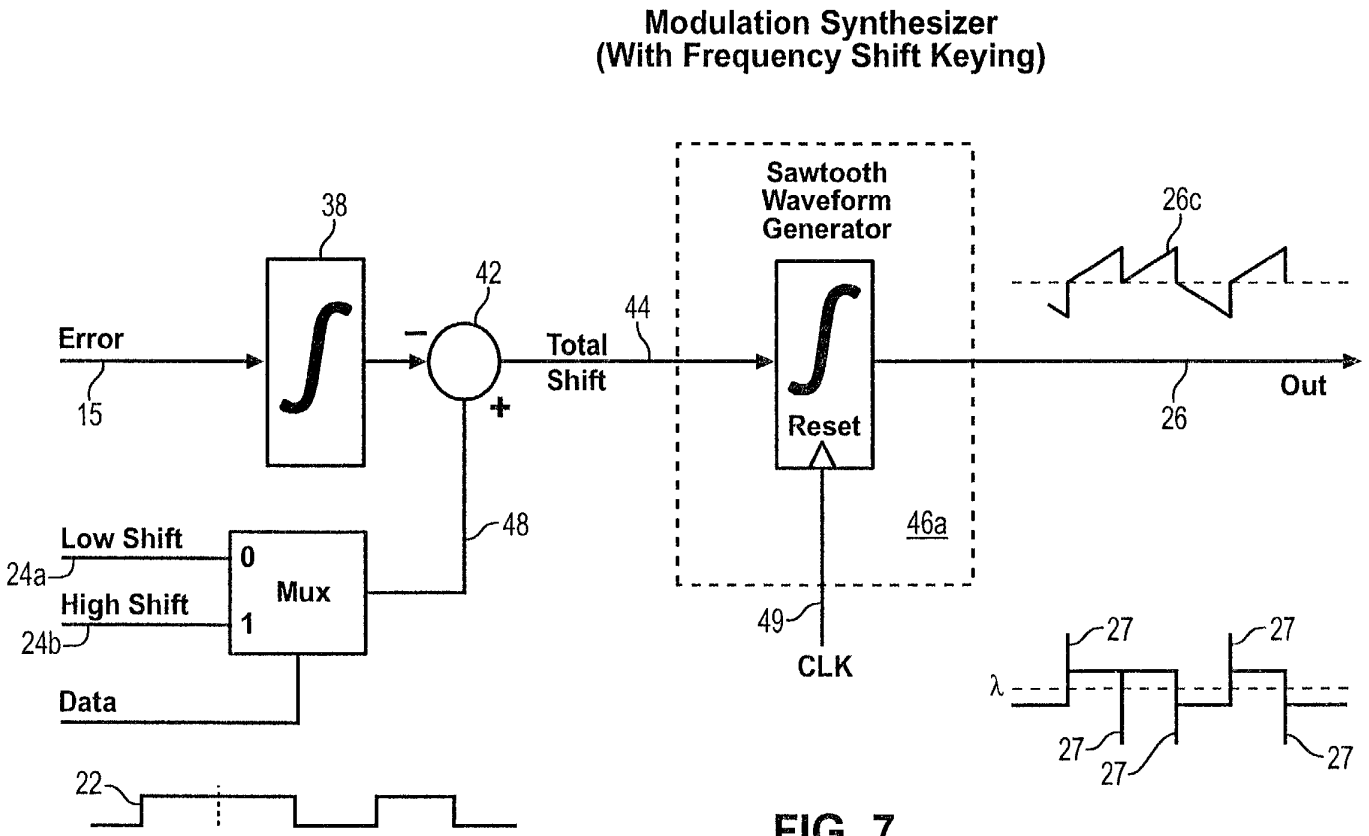

FIG. 7

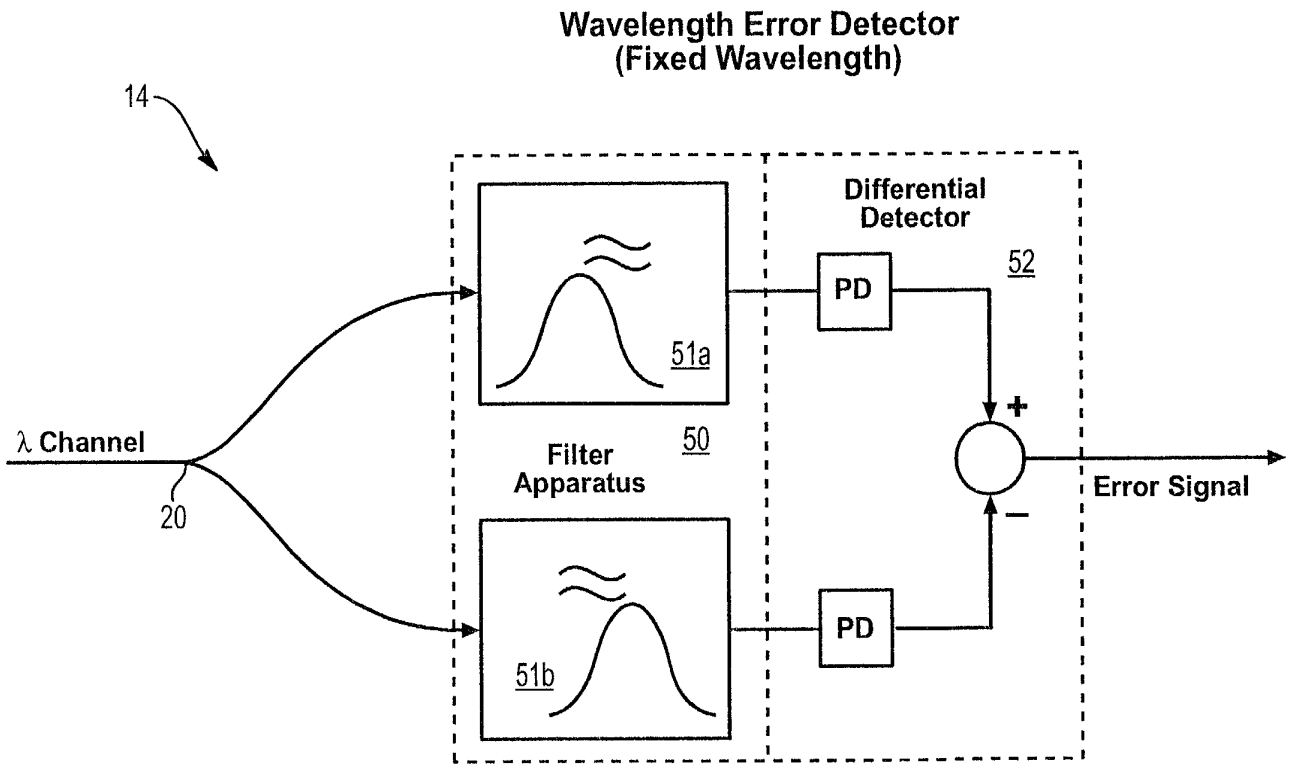
Wavelength Error Detector
(Fixed Wavelength)
14
Differential
Detector
52
PD
51a
λ Channel
20
Filter
Apparatus
50
+
−
Error Signal
PD
51b

FIG. 8

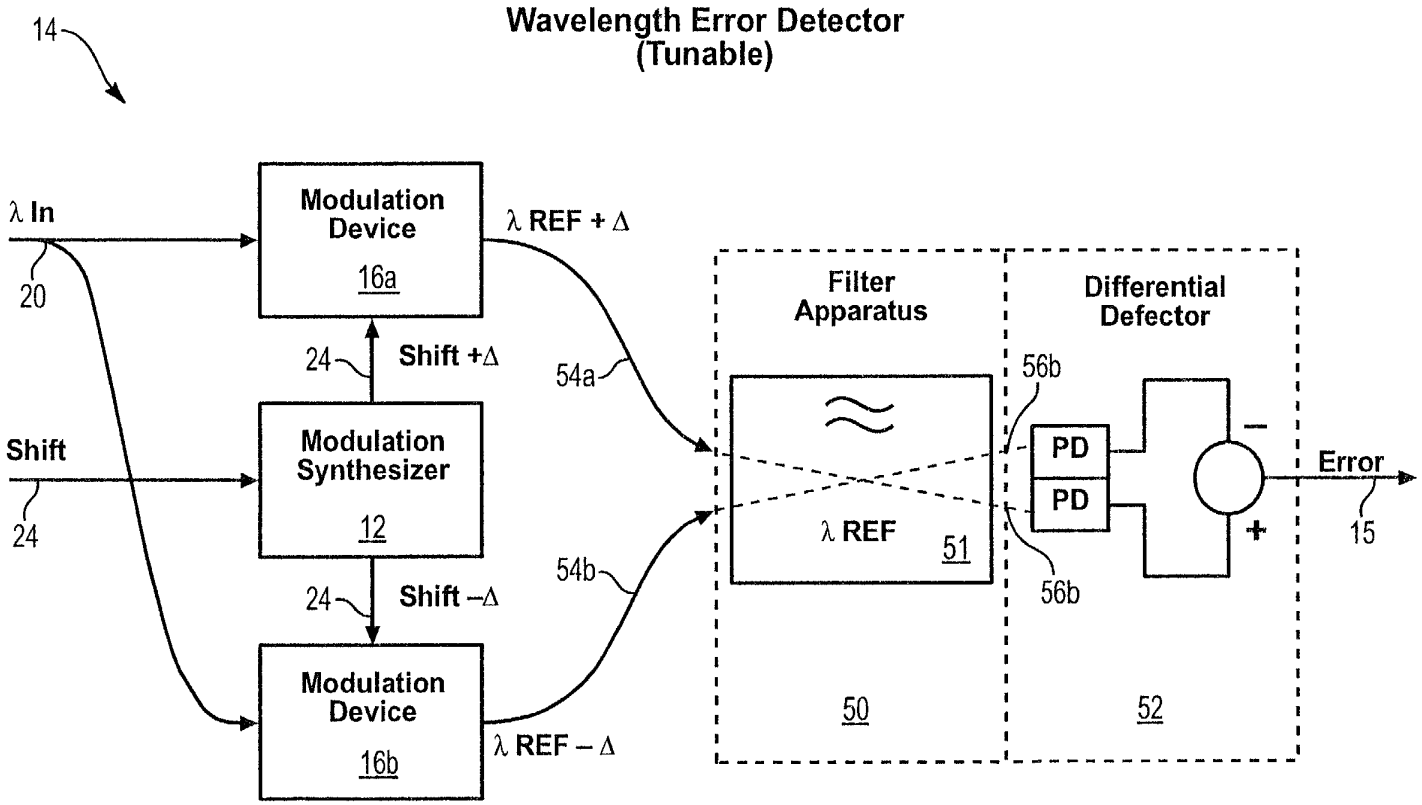
14
Wavelength Error Detector
(Tunable)
λ In
20
Modulation
Device
16a
λ REF + Δ
24
Shift +Δ
54a
Shift
24
Modulation
Synthesizer
12
24
Shift –Δ
54b
Modulation
Device
16b
λ REF – Δ
Filter
Apparatus
Differential
Defector
56b
PD
PD
λ REF
51
56b
Error
15
50
52

FIG. 9

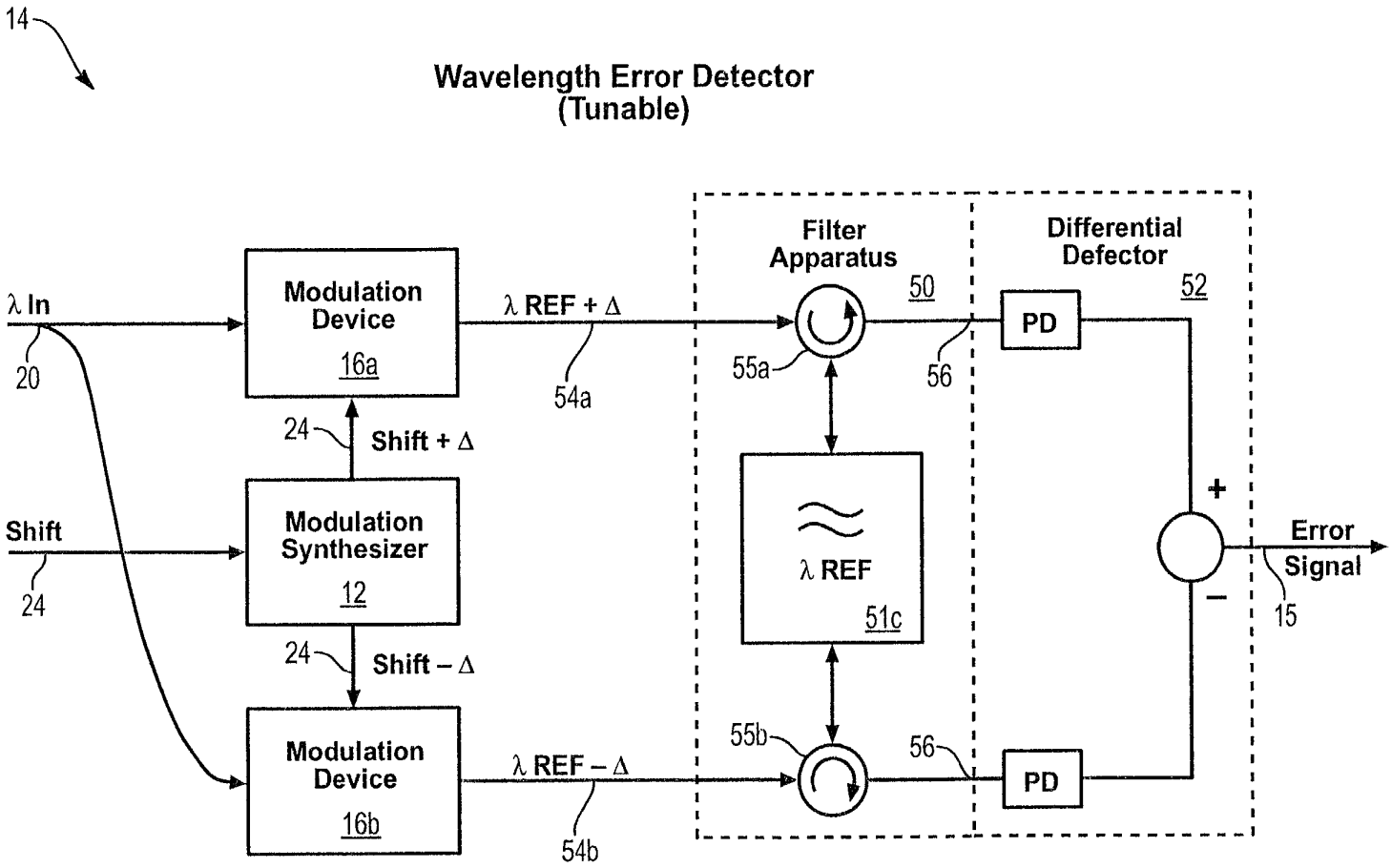

FIG. 10

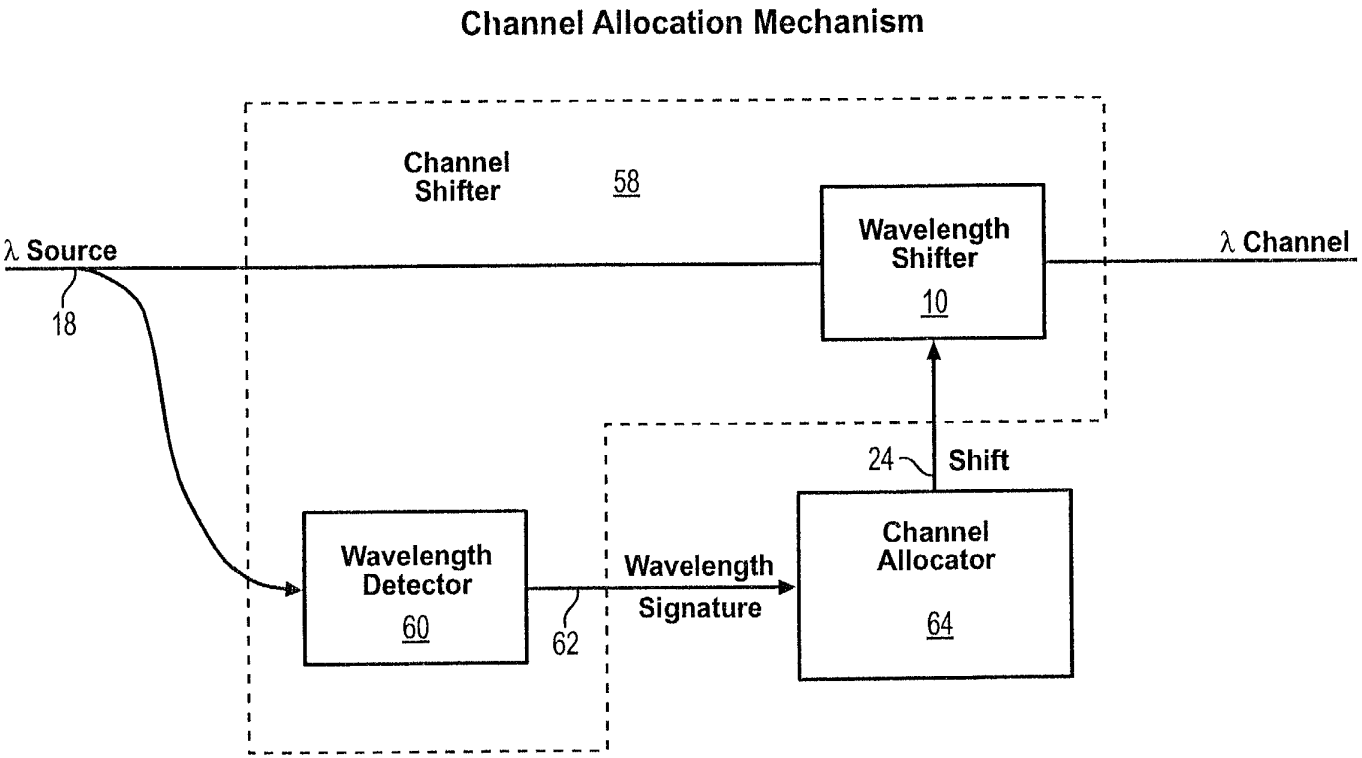
Channel Allocation Mechanism
Channel Shifter
58
λ Source
18
Wavelength Shifter
10
λ Channel
24
Shift
Wavelength Detector
60
62
Wavelength Signature
Channel Allocator
64

FIG. 11

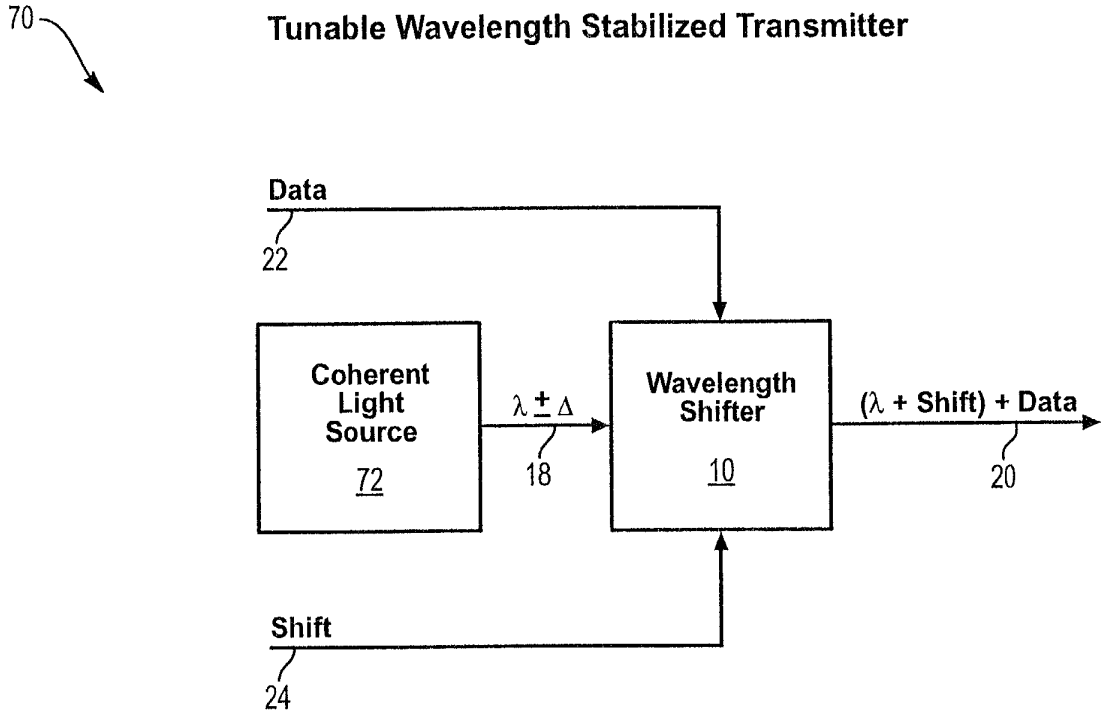

FIG. 12

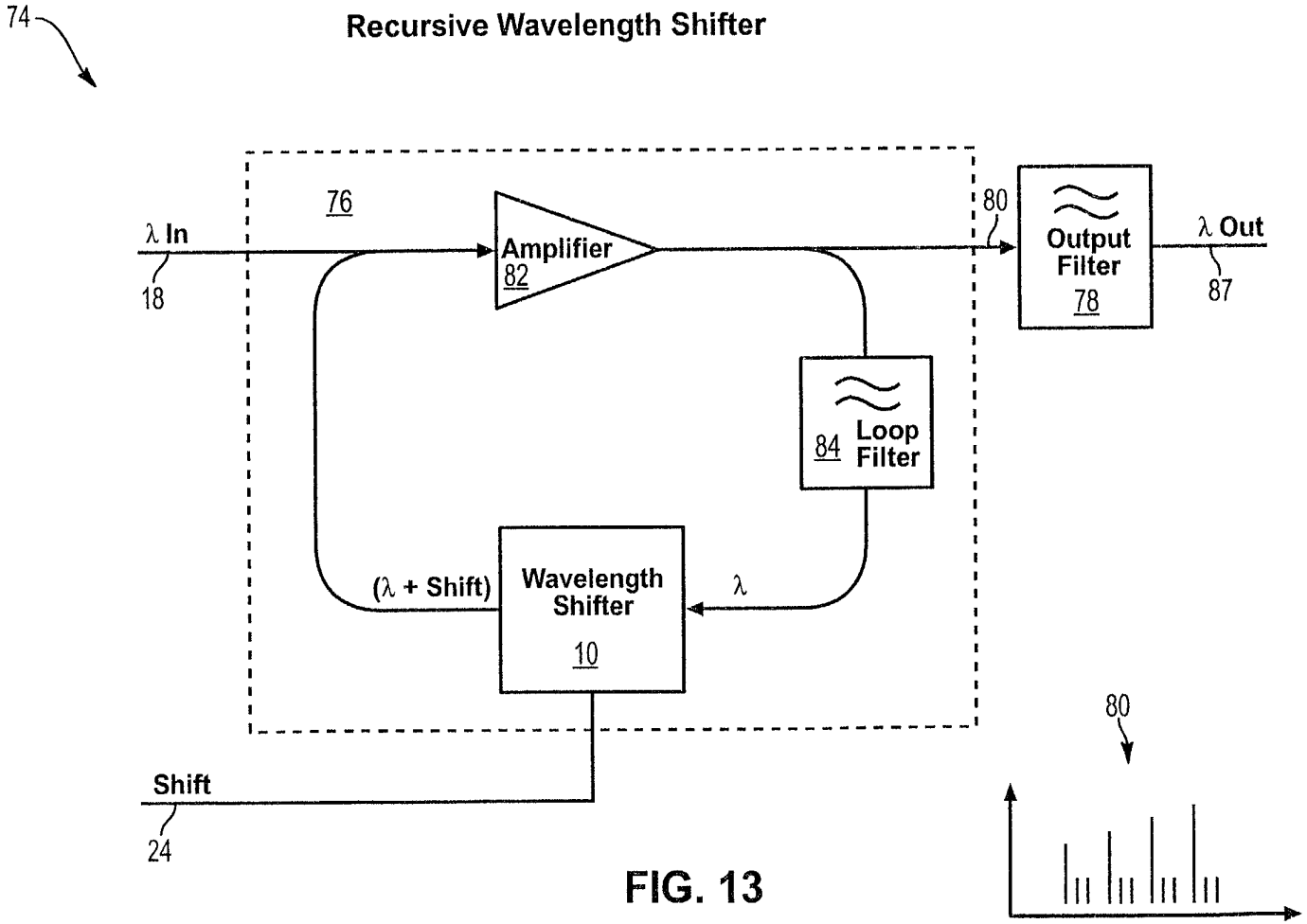

FIG. 13

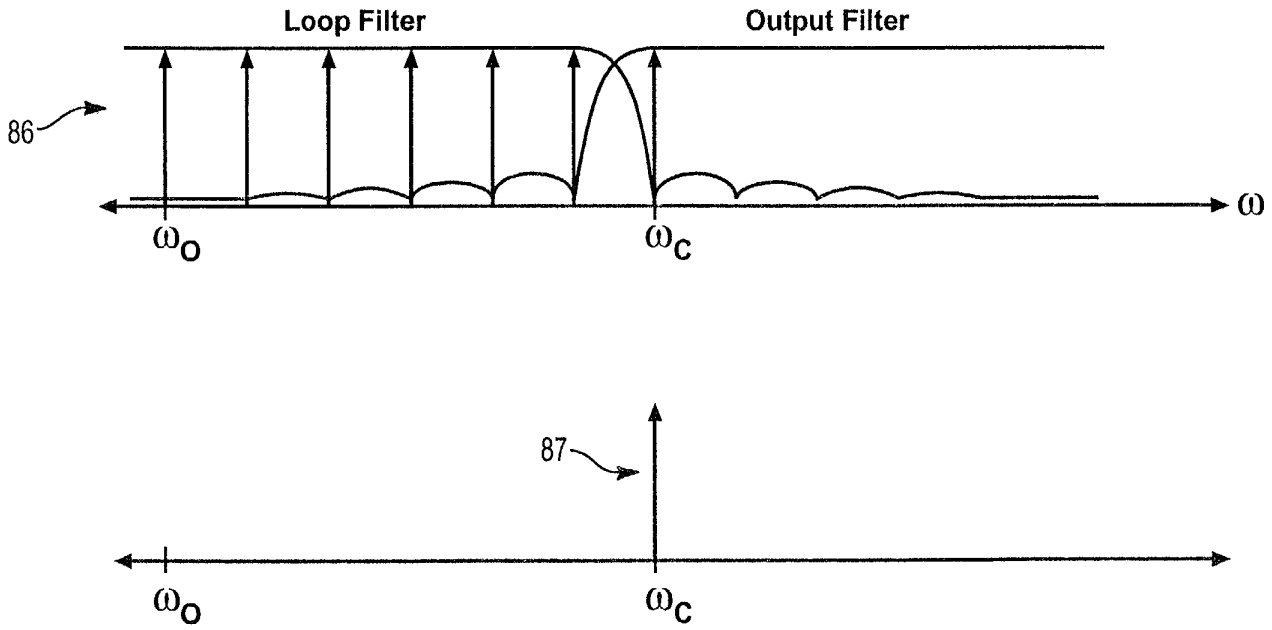

FIG. 14